

CONSTRUCTION VALUE ENGINEERING CONCEPT PROPOSAL
MISSOURI DEPARTMENT OF TRANSPORTATION

Date 10/30/2007

Contract ID Off-Systems: BRM-5528(602)

Job No. BRM-5528(602)

County City of St. Louis Route Delmar

Original Bid Cost \$3,242,097.86

Contractor Kozeny-Wagner

By Matt Gardner

Designed By CRD (Consultant)

Phone (636) 296-2012

VECP 08-39

1. Description of existing requirements and proposed change(s). Advantages/Disadvantages

Existing design is for two spans. Proposed change is to eliminate one span by moving the west abutment eastward onto unused MetroLink property and moving the east abutment eastward, farther away from the MetroLink tracks. Eliminating one span decreases construction cost and construction time. Moving the east abutment farther from MetroLink tracks allows work to take place during normal construction time, not 2 to 3 hours per night when Metro is out of service. May need easement from Metro.

2. Estimate of reduction in construction costs. \$450,900.00

3. Prediction of any effects the proposed change(s) will have on other department costs, such as maintenance and operations.

Reduces future bridge maintenance costs by reducing square footage of bridge surface.

4. Anticipated date for submittal of detailed change(s) of items required by Section 104.6 of the Specifications.

11/15/2007

(date)

5. Deadline for issuing a change order to obtain maximum cost reduction, noting the effect of contract completion time or delivery schedule.

11/15/2007

(date)

Completion moved up to December, 2008, before I64 is closed in City

(effect)

6. Dates of any previous or concurrent submission of the same proposal.

None

(date and/or dates)

Additional Comments:

Proposed project still includes two phases of work. Consideration is being given to closing the roadway entirely and performing the work in one phase. Time of completion, and possibly cost of work, could be favorably affected.

**** Portion Below This Line To Be Filled Out by MoDOT ****

Comments:

Thomas A. Behan, P.E.

Submitted By Resident Engineer

10/30/2007

Date

Comments:

THE STRUCTURAL RE-DESIGN WILL HAVE TO COMPLY WITH CURRENT MODOT STANDARDS AND REQUIREMENTS AND WILL BE SUBJECT TO REVIEW BY MODOT BRIDGE DIVISION, (SEE ATTACHMENT FOR GENERAL DETAILS.)

☒ Approval
Recommended

☐ Rejection
Recommended

Ed Harris

District Engineer

10/31/2007

Date

Comments: see above comments

☒ Approval

☐ Rejection

P27M for

Dave Ahlers

State Operations Engineer

11/7/07

Date

Distribution: Resident Engineer, District Operations Engineer, State Operations Engineer
*Value Engineering Administrator - *MoDOT, P.O. Box 270, Jefferson City, MO 65102

Delmar Bridge

General Description of Value Engineering Proposal

1. Move west abutments eastward:
 - a. Drive pile to refusal rather than bore pile holes next to old abutment and fill holes with concrete; Construct cap (beam abutment) on top of pile;
 - b. Construct MSE wall at abutment locations:
 - i. At west abutment, MSE walls would return west to original structure, which would remain in place;
 - ii. At east abutment, MSE walls would return east into the embankment and the existing abutment would be removed thereby creating more horizontal clearance for METROLINK;
2. Eliminate the center bent, making a single span structure;
3. Utilize longer precast prestressed deck beams. Initial analysis indicates thickness would not change but all would be 3 ft. wide (instead of mostly 4' wide);
4. Construct deck, similar to original plan.

VALUE ENGINEERING CHECK SHEET

TYPE OF WORK

(Check one that applies)

- ☒ Bridge/Structure/Footings
- ☐ Drainage Structures (RCP, RCB, CMP's ect)
- ☐ TCP/MOT
- ☐ Paving (PCCP, ect.)
- ☐ Grading/MSE Walls
- ☐ Signal/Lighting/ITS
- ☐ Misc. _____

SUMMARY OF PROPOSAL

(If needed, condense summary to a couple of lines)

Eliminate one span of the bridge by moving the west abutment eastward onto unused Metrolink property and moving the east abutment eastward, farther away from the Metrolink tracks.

SCANNING OF DOCUMENT

If the proposal is large, please mark or make note, which pages need to be scanned into the database. If there are special instructions, make note of them here.

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